

Contents

- Aguilera, A., Benitez, T.**
Role of mitochondria in ethanol tolerance of *Saccharomyces cerevisiae* 389
- Ahmad, M. H.**, see Hollingsworth, R., et al. 18
- Alef, K., Jackson, J. B., McEwan, A. G., Ferguson, S. J.**
The activities of two pathways of nitrate reduction in *Rhodopseudomonas capsulata* 403
- Ambler, R.**, see MacDonald, M. J., et al. 152
- Barnett, R. S.**, see Williams, A. L. 190
- Bar-Or, Y., Kessel, M., Shilo, M.**
Modulation of cell surface hydrophobicity in the benthic cyanobacterium *Phormidium J-1* 21
- Beimborn, D. B.**, see Schönheit, P. 354
- Benítez, T.**, see Aguilera, A. 389
- Blotevogel, K.-H., Fischer, U., Mocha, M., Janssen, S.**
Methanobacterium thermoalcaliphilum spec. nov., a new moderately alkaliphilic and thermophilic autotrophic methanogen 211
- Blotevogel, K.-H., Fischer, U.**
Isolation and characterization of a new thermophilic and autotrophic methane producing bacterium: *Methanobacterium thermoaggregans* spec. nov. 218
- Böger, P.**, see Weisshaar, H. 349
- Boele-Bos, S. A.**, see Stam, W. T., et al. 340
- Braun, M., Stolp, H.**
Degradation of methanol by a sulfate reducing bacterium 77
- Braus, G., Furter, R., Prantl, F., Niederberger, P., Hüter, R.**
Arrangement of genes *TRP1* and *TRP3* of *Saccharomyces cerevisiae* strains 383
- Broda, P.**, see MacDonald, M. J., et al. 152
- Broglie, R. M.**, see Radcliffe, C. W., et al. 136
- Brown, A. D.**, see Marengo, T., et al. 262
- Brown, D. R.**, see Rosenberg, E., et al. 51
- Bruinenberg, P. M., Jonker, R., Dijken, J. P. van, Scheffers, W. A.**
Utilization of formate as an additional energy source by glucose-limited chemostat cultures of *Candida utilis* CBS621 and *Saccharomyces cerevisiae* CBS8066 302
- Buchanan, R. L., Ocker, L. A., Stahl, H. G.**
Effect of 2-deoxyglucose, α -methylglucoside, and glucosamine on aflatoxin production by *Aspergillus parasiticus* 200
- Buckel, W.**, see Wohlfarth, G. 128
- Carr, N. G.**, see Thomas, P. H. 81
- Casselton, L. A.**, see Veal, D. 157
- Castenholz, R. W.**, see Pierson, B. K., et al. 164
- Charnley, A. K.**, see Dillon, R. J. 204
- Cocchi, S., Zannoni, D.**
Effects of myxothiazol and 5-undecyl-6-hydroxy-4,7-dioxobenzothiazole on the respiratory pathways of the phytopathogenic fluorescent bacteria *Pseudomonas cichorii* and *Pseudomonas aptata* 365
- Commanday, F., Macy, J. M.**
Effect of substrate nitrogen on lignin degradation by *Pleurotus ostreatus* 61
- Conway de Macario, E., Macario, A. J. L., Pastini, A.**
The superficial antigenic mosaic of *Methanobrevibacter smithii*. Identification of determinants and isolates by monoclonal antibodies 311
- Cordruwisch, R.**, see Ollivier, B., et al. 307
- Crabbendam, P. M., Neijssel, O. M., Tempest, D. W.**
Metabolic and energetic aspects of the growth of *Clostridium butyricum* on glucose in chemostat culture 375
- Edwards, M. R., Fritz, K. E.**
Detection of an antigenic cell wall layer in *Histoplasma capsulatum*. An immunoelectron microscopic study 242
- Eikmanns, B., Thauer, R. K.**
Evidence for the involvement and role of a corrinoid enzyme in methane formation from acetate in *Methanosaeca barkeri* 175
- Emala, C. W.**, see Sjöblad, R. D., et al. 101
- Enderlin, C. S.**, see Meeks, J. C., et al. 229
- Daldal, F.**
Isolation of mutants of *Clostridium pasteurianum* 93
- Demain, A. L.**, see Rosenberg, E., et al. 51
- Dijken, J. P. van**, see Bruinenberg, P. M., et al. 302
- Dijkhuizen, L.**, see Levering, P. R. 113
- Dillon, R. J., Charnley, A. K.**
A technique for accelerating and synchronising germination of conidia of the entomopathogenic fungus *Metarrhizium anisopliae* 204
- Doetsch, R. N.**, see Sjöblad, R. D., et al. 101
- Duchrow, M., Kohring, G.-W., Giffhorn, F.**
Virulence as a consequence of genome instability of a novel temperature bacteriophage, ϕ RsG1, of *Rhodobacter sphaeroides* Y 141
- Ferguson, S. J.**, see Alef, K., et al. 403
- Ferry, J. G.**, see Sowers, K. R. 148
- Fischer, U.**, see Blotevogel, K.-H. 218
- Fischer, U.**, see Blotevogel, K.-H., et al. 211
- Fischer, U.**, see Steinmetz, M. A. 253
- Flores, E.**, see Romero, J. M., et al. 1
- Foerster, H. F.**
The effects of alterations in the suspending medium on low temperature activation of spores of *Bacillus stearothermophilus* NGB101 185

- Fracek, S. P. Jr., Stoltz, J. F.**
Spirochaeta bajacaliforniensis sp. n. from a microbial mat community at Laguna Figueroa, Baja California Norte, Mexico 317
- Franken, N.**, see Seidl, P. H., et al. 121
- Fritz, K. E.**, see Edwards, M. R. 242
- Fuhrmann, M.**, see Hennecke, H., et al. 342
- Furter, R.**, see Braus, G., et al. 383
- Garcia, J.-L.**, see Ollivier, B., et al. 307
- Giffhorn, F.**, see Duchrow, M., et al. 141
- Giovannoni, S. J.**, see Pierson, B. K., et al. 164
- Glover, H. E.**
 The relationship between inorganic nitrogen oxidation and organic carbon production in batch and chemostat cultures of marine nitrifying bacteria 45
- Golecki, J. R.**, see Jürgens, U. J., et al. 168
- Golecki, J. R.**, see Seidl, P. H., et al. 121
- Goodman, H. J. K., Strydom, E., Woods, D. R.**
 Heat shock stress in *Bacteroides fragilis* 362
- Gottschalk, G.**, see Tran-Din, K. 87
- Gresshoff, P. M.**, see Humbeck, C., et al. 223
- Guerrero, M. G.**, see Romero, J. M., et al. 1
- Hadley, R. G.**, see MacLeod, R. A., et al. 248
- Häder, D.-P.**, see Mikolajczyk, E., et al. 397
- Hamamoto, K.**, see Murayama, T., et al. 109
- Hennecke, H., Kaluza, K., Thöny, B., Fuhrmann, M., Ludwig, W., Stackebrandt, E.**
 Concurrent evolution of nitrogenase genes and 16S rRNA in *Rhizobium* species and other nitrogen fixing bacteria 342
- Herdman, M.**, see Sutherland, J. M., et al. 269
- Hipkiss, A. R.**, see Potier, P., et al. 28
- Hollingsworth, R., Smith, E., Ahmad, M. H.**
 Chemical composition of extracellular polysaccharides of cowpea rhizobia 18
- Holtel, A., Kleiner D.**
 Regulation of methylammonium transport in *Paracoccus denitrificans* 285
- Hütter, R.**, see Braus, G., et al. 383
- Humbeck, C., Thierfelder, H., Gresshoff, P. M., Werner, D.**
 Competitive growth of slow growing *Rhizobium japonicum* against fast growing *Enterobacter* and *Pseudomonas* species at low concentrations of succinate and other substrates in dialysis culture 223
- Irschik, H., Reichenbach, H.**
 An unusual pattern of carbohydrate utilization in *Corallococcus* (*Myxococcus*) *coralloides* (Myxobacterales) 40
- Ishikawa, T.**, see Murayama, T., et al. 109
- Jackson, J. B.**, see Alef, K., et al. 403
- Jacob, J. S.**, see Miller, K. R. 333
- Jannsen, S.**, see Blotevogel, K.-H., et al. 211
- Jonker, R.**, see Bruinenberg, P. M., et al. 302
- Jorgensen, P. A.**, see Meeks, J. C., et al. 229
- Joseph, C. M.**, see Meeks, J. C., et al. 229
- Jürgens, U. J., Golecki, J. R., Weckesser, J.**
 Characterization of the cell wall of the unicellular cyanobacterium *Synechocystis* PCC 6741 168
- Kaluza, K.**, see Hennecke, H., et al. 342
- Kent, H. M.**, see Postgate, J. R. 289
- Kessel, M.**, see Bar-Or, Y., et al. 21
- Kjelleberg, S.**, see Mårdén, P., et al. 326
- Kleiner D.**, see Holtel, A. 285
- Klont, B.**, see Otto, R., et al. 97
- Kohring, G.-W.**, see Duchrow, M., et al. 141
- Konings, W. N.**, see Otto, R., et al. 97
- Konisky, J.**, see Wood, A. G., et al. 259
- Kushner, D. J.**, see Potier, P., et al. 28
- Levering, P. R., Dijkhuizen, L.**
 Regulation of methylotrophic and heterotrophic metabolism in *Arthrobacter* P1. Growth on mixtures of methylamine and acetate in batch and continuous cultures 113
- Lilley, R. McC.**, see Marengo, T., et al. 262
- Lim, S. T.**
 K^+ -ATPase from *Rhizobium* sp. UMKL 20 393
- Lombardo, A.**, see Ollivier, B., et al. 307
- Ludwig, W.**, see Hennecke, H., et al. 342
- Macario, A. J. L.**, see Conway de Macario, E., et al. 311
- MacDonald, M. J., Ambler, R., Broda, P.**
 Regulation of intracellular cyclic AMP levels in the white-rot fungus *Phanerochaete chrysosporium* during the onset of idiophasic metabolism 152
- MacLeod, P. R.**, see MacLeod, R. A., et al. 248
- MacLeod, R. A., Hadley, R. G., Szalay, A. A., Vink, B., MacLeod, P. R.**
 Expression of genes from the marine bacterium *Alteromonas haloplanktis* 214 in *Escherichia coli* K-12 248
- Macy, J. M.**, see Commanday, F. 61
- Madigan, M. T.**, see Masters, R. A. 103
- Malmcrona-Friberg, K.**, see Mårdén, P., et al. 326
- Mårdén, P., Tunlid, A., Malmcrona-Friberg, K., Odham, G., Kjelleberg, S.**
 Physiological and morphological changes during short term starvation of marine bacterial isolates 326
- Marengo, T., Lilley, R. McC., Brown, A. D.**
 Osmoregulation in *Dunaliella*. Catalysis of the glycerol-3-phosphate dehydrogenase reaction in a chloroplast-enriched fraction of *Dunaliella tertiolecta* 262
- Masters, R. A., Madigan, M. T.**
 Evidence for adenylylation/deadenylylation control of the glutamine synthetases of *Rhodospirillum tenue* and *Rhodococcus purpureus* 103
- Matsuda, Y.**, see Saito, T., et al. 207

- McEwan, A. G.**, see Alef, K., et al. 403
- McFadden, B. A.**, see Torres-Ruiz, J. A. 55
- Meeks, J. C., Steinberg, N., Joseph, C. M., Enderlin, C. S., Jorgensen, P. A., Peters, G. A.**
Assimilation of exogenous and dinitrogen-derived $^{15}\text{NH}_4^+$ by *Anabaena azollae* separated from *Azolla caroliniana* Willd. 229
- Mikolajczyk, E., Häder, D.-P., Nultsch, W.**
Photodynamically induced chemoresponses of the colorless flagellate, *Astasia longa*, in the presence of riboflavin 397
- Miller, K. R., Jacob, J. S.**
The *Rhodopseudomonas viridis* photosynthetic membrane: arrangement *in situ* 333
- Mocha, M.**, see Blotevogel, K.-H., et al. 211
- Moll, H.**, see Wollenweber, H.-W., et al. 6
- Moreno, S., Ruiz, T., Sánchez, Y., Villanueva, J. R., Rodríguez, L.**
Subcellular localization and glycoprotein nature of the invertase from the fission yeast *Schizosaccharomyces pombe* 370
- Mur, L. R.**, see Riegman, R. 72
- Mur, L. R.**, see Riegman, R., et al. 66
- Murayama, T., Uno, I., Hamamoto, K., Ishikawa, T.**
A cyclic adenosine 3',5'-monophosphate-dependent protein kinase mutant of *Neurospora crassa* 109
- Neijssel, O. M.**, see Crabbendam, P. M., et al. 375
- Niederberger, P.**, see Braus, G., et al. 383
- Niederman, R. A.**, see Radcliffe, C. W., et al. 136
- Nishimura M.**, see Okamura, K., et al. 12
- Nultsch, W., Schuchart, H.**
A model of the phototactic reaction chain of the cyanobacterium *Anabaena variabilis* 180
- Nultsch, W.**, see Mikolajczyk, E., et al. 397
- Ocker, L. A.**, see Buchanan, R. L., et al. 200
- Odham, G.**, see Mårdén, P., et al. 326
- Okamura, K., Takamiya, K., Nishimura M.**
Photosynthetic electron transfer system is inoperative in anaerobic cells of *Erythrobacter* species strain OCh 114 12
- Ollivier, B., Cordruwisch, R., Lombardo, A., Garcia, J.-L.**
Isolation and characterization of *Sporomusa acidovorans* sp. nov., a methylotrophic homoacetogenic bacterium 307
- Otto, R., Klont, B., Konings, W. N.**
The relation between phosphate potential and growth rate of *Streptococcus cremoris* 97
- Pastini, A.**, see Conway de Macario, E., et al. 311
- Peters, G. A.**, see Meeks, J. C., et al. 229
- Pierson, B. K., Giovannoni, S. J., Stahl, D. A., Castenholz, R. W.**
Heliothrix oregonensis, gen. nov., sp. nov., a phototrophic filamentous gliding bacterium containing bacteriochlorophyll *a* 164
- Postgate, J. R., Kent, H. M.**
Expression of *Klebsiella pneumoniae* *nif* genes in *Proteus mirabilis* 289
- Potier, P., Hipkiss, A. R., Kushner, D. J.**
Protein turnover in a psychrotrophic bacterium 28
- Prantl, F.**, see Braus, G., et al. 383
- Radcliffe, C. W., Broglie, R. M., Niederman, R. A.**
Sites of phospholipid biosynthesis during induction of intracytoplasmic membrane formation in *Rhodopseudomonas sphaerooides* 136
- Reichenbach, H.**, see Irschik, H. 40
- Riegman, R., Mur, L. R.**
Effects of photoperiodicity and light irradiance on phosphate-limited *Oscillatoria agardhii* in chemostat cultures. II. Phosphate uptake and growth 72
- Riegman, R., Rutgers, M., Mur, L. R.**
Effects of photoperiodicity and light irradiance on phosphate-limited *Oscillatoria agardhii* in chemostat cultures. I. Photosynthesis and carbohydrate storage 66
- Rietschel, E. Th.**, see Wollenweber, H.-W., et al. 6
- Rodríguez, L.**, see Moreno, S., et al. 370
- Roitsch, T., Stolp, H.**
Overproduction of methanol dehydrogenase in glucose grown cells of a restricted RuMP type methylotroph 34
- Romero, J. M., Flores, E., Guerrero, M. G.**
Inhibition of nitrate utilization by amino acids in intact *Anacystis nidulans* cells 1
- Rosenberg, E., Brown, D. R., Demain, A. L.**
The influence of gramicidin S on hydrophobicity of germinating *Bacillus brevis* spores 51
- Rutgers, M.**, see Riegman, R., et al. 66
- Ruiz, T.**, see Moreno, S., et al. 370
- Saito, T., Tsubo, Y., Matsuda, Y.**
Synthesis and turnover of cell body-agglutinin as a pool of flagellar surface-agglutinin in *Chlamydomonas reinhardtii* 207
- Sánchez, Y.**, see Moreno, S., et al. 370
- Scheffers, W. A.**, see Bruinenberg, P. M., et al. 302
- Schink, B.**
Fermentation of acetylene by an obligate anaerobe, *Pelobacter acetylenicus* sp. nov. 295
- Schleifer, K. H.**, see Seidl, P. H., et al. 121
- Schönheit, P., Beimborn, D. B.**
Presence of a Na^+/H^+ antiporter in *Methanobacterium thermoautotrophicum* and its role in Na^+ dependent methanogenesis 354
- Schramek, S.**, see Wollenweber, H.-W., et al. 6
- Schuchart, H.**, see Nultsch, W. 180
- Seidl, P. H., Golecki, J. R., Franken, N., Schleifer, K. H.**
Immunoelectron microscopic studies on the localization of peptidoglycan peptide subunit pentapeptides in bacterial cell walls 121
- Shilo, M.**, see Bar-Or, Y., et al. 21

- Sjöblad, R. D., Doetsch, R. N., Emala, C. W.**
Novel function of eubacterial flagella: role in aggregation of a marine bacterium 101
- Smith, E., see Hollingsworth, R., et al.** 18
- Sowers, K. R., Ferry, J. G.**
Trace metal and vitamin requirements of *Methanococcoides methylutens* grown with trimethylamine 148
- Stackebrandt, E., see Hennecke, H., et al.** 342
- Stahl, D. A., see Pierson, B. K., et al.** 164
- Stahl, H. G., see Buchanan, R. L., et al.** 200
- Stam, W. T., Boele-Bos, S. A., Stulp, B. K.**
Genotypic relationships between *Prochloron* samples from different localities and hosts as determined by DNA-DNA reassociations 340
- Steinberg, N., see Meeks, J. C., et al.** 229
- Steinmetz, M. A., Fischer, U.**
Thiosulfate sulfur transferases (Rhodanases) of *Chlorobium vibrioforme* f. *thiosulfatophilum* 253
- Stewart, W. D. P., see Sutherland, J. M., et al.** 269
- Stipanovic, R. D., see Wheeler, M. H.** 234
- Stolp, H., see Braun, M.** 77
- Stolp, H., see Roitsch, T.** 34
- Stoltz, J. F., see Fracek, S. P. Jr.** 317
- Strohl, W. R., see Vargas, A.** 275, 279
- Strydom, E., see Goodman, H. J. K., et al.** 362
- Stulp, B. K., see Stam, W. T., et al.** 340
- Sutherland, J. M., Stewart, W. D. P., Herdman, M.**
Akinetes of the cyanobacterium *Nostoc* PCC 7524: morphological changes during synchronous germination 269
- Szalay, A. A., see MacLeod, R. A., et al.** 248
- Takamiya, K., see Okamura, K., et al.** 12
- Tempest, D. W., see Crabbendam, P. M., et al.** 375
- Thauer, R. K., see Eikmanns, B.** 175
- Thierfelder, H., see Humbeck, C., et al.** 223
- Thöny, B., see Hennecke, H., et al.** 342
- Thomas, P. H., Carr, N. G.**
The invariance of macromolecular composition with altered light limited growth rate of *Amphidinium carteri* (dinophyceae) 81
- Torres-Ruiz, J. A., McFadden, B. A.**
Isolation of L_e and L_eS_e forms of ribulose bisphosphate carboxylase/oxygenase from *Chromatium vinosum* 55
- Tran-Din, K., Gottschalk, G.**
Formation of D(-)-1,2-propanediol and D(-)-lactate from glucose by *Clostridium sphenoides* under phosphate limitation 87
- Tsubo, Y., see Saito, T., et al.** 207
- Tunlid, A., see Mårdén, P., et al.** 326
- Uno, I., see Murayama, T., et al.** 109
- Vargas, A., Strohl, W. R.**
Ammonia assimilation and metabolism by *Beggiatoa alba* 275
- Vargas, A., Strohl, W. R.**
Utilization of nitrate by *Beggiatoa alba* 279
- Veal, D., Casselton, L. A.**
Regulation of tryptophan metabolism in *Coprinus cinereus*: Isolation and characterisation of mutants resistant to 5-fluorindole 157
- Villanueva, J. R., see Moreno, S., et al.** 370
- Vink, B., see MacLeod, R. A., et al.** 248
- Weckesser, J., see Jürgens, U. J., et al.** 168
- Weisshaar, H., Böger, P.**
Pathways of hydrogen uptake in the cyanobacterium *Nostoc muscorum* 349
- Werner, D., see Humbeck, C., et al.** 223
- Wheeler, M. H., Stipanovic, R. D.**
Melanin biosynthesis and the metabolism of flaviolin and 2-hydroxyjuglone in *Wangiella dermatitidis* 234
- Whitman, W. B., see Wood, A. G., et al.** 259
- Wiegel, J.**
Leucine biosynthesis in *Alcaligenes eutrophus* H16: Influence of amino acid additions on the formation of active α -isopropylmalate synthase and α -acetohydroxy acid synthase 194
- Williams, A. L., Barnett, R. S.**
Evidence for cAMP-mediated control of isoleucyl-tRNA synthetase formation in *Escherichia coli* K-12 190
- Wohlfarth, G., Buckel, W.**
A sodium ion gradient as energy source for *Peptostreptococcus asaccharolyticus* 128
- Wollenweber, H.-W., Schramek, S., Moll, H., Rietschel, E. Th.**
Nature and linkage type of fatty acids present in lipopoly-saccharides of phase I and II *Coxiella burnetii* 6
- Wood, A. G., Whitman, W. B., Konisky, J.**
A newly-isolated marine methanogen harbors a small cryptic plasmid 259
- Woods, D. R., see Goodman, H. J. K., et al.** 362
- Zannoni, D., see Cocchi, S.** 365

